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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/585,243

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Takao Yamamoto

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EXAMINER

WARREN, DAVID S

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/585,243

Applicant(s)

YAMAMOTO, TAKAO

Examiner

David S. Warren

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20, 23, 24, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 1-14, 21, 22, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 - 14, 21, 22, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Eitaki et al. (5,278,348). As stated in the previous office action (March 12, 2003, paper no. 19) the aforementioned claims are rejected as follows: Regarding claims 1, 4, 5, 9, and 21, 22, 25, 26, Eitaki discloses an extension board (ROM card 12) for storing patterns (i.e., sequences) and a reproducing device for reproducing musical tone signals (col. 5, lines 36 – 40). The read out device (I/O interface of claim 4) is inherent, since all data stored in ROM 12 must be read out. The “extended music element” is considered to be the additional waveform data (e.g., tone color or timbre) stored in ROM 12. In other words, if the tone generator is capable of producing tone colors of, say, flute and guitar, any additional tones of say, organ and piano are considered to be an extension of the original tone generator. The setting device is shown by Eitaki as element 30 (fig. 2), which sets info as well as “sends” data to extension board 12. Eitaki states that data is taken from both ROM 9 and ROM card 12, therefore, the “tone generator is independently incapable of generating musical tone signals having the extended music element.” As defined supra, any additional waveform data on card 12 will yield a situation wherein the “tone generator is

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independently incapable of generating musical tone signals having the extended music element.” The second synthesizer is the waveform data located on extension board ROM 12. “[A]ctivating a first music synthesizer of the musical tone generation device” is shown by Eitaki’s elements 1 and 2 (fig. 1). “[I]nitiating the setup for the reproduction of the musical tone signals” is shown by Eitaki as the manual operation of element 26 (or 34). Regarding claims 2 and 10, waveform data inherently contains “tone color” (see col. 6, line 6 – tone color is synonymous with timbre). Since Eitaki provides an editing means for extension board 12 data, this would allow the data thereon to be “different” than that of the synthesizer section (once the data was edited). Regarding claims 3, 11, and 13, Eitaki teaches that extension board contains arpeggio data (col. 5, line 24). Regarding claims 6, 7, and 12, Eitaki teaches “various kinds of waveform data” are stored in ROM (i.e., a plurality of tones and arpeggios are “secured”). The term “secures” in claims 12 and 13 is interpreted to mean “addressable” and “readable” from ROM. Regarding claim 14, by definition “arpeggios” are time-shifted note patterns outlining a chord (i.e., each note of the chord is time-shifted so that each note is sounded at a different time. In the Eitaki teachings, automatic arpeggios are performed by playing a single note – hence, other notes are shifted in time from the original to complete the arpeggio. Regarding claim 8, Eitaki shows that “power on” initiates a sequence performance process (step 05 of fig. 7). Since Eitaki states that all functions (sequences, waveform data, arpeggios) of ROM 10 can be performed by extension board 12, figure 7 of Eitaki is considered to operate in accordance with ROM 12 (and therefore meets applicant’s claim 8).

Allowable Subject Matter

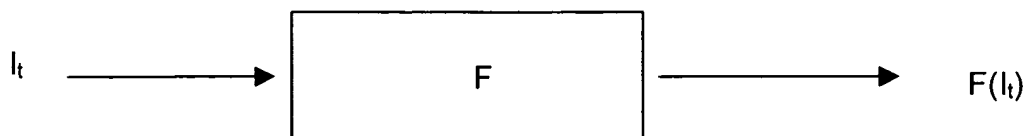
Claims 15 - 20, 23, 24, 27, and 28 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose the use of mixing tones (or tone colors or patterns) of an extension board with those of a tone generator.

Response to Arguments

Applicant's arguments filed September 24, 2003 have been fully considered but they are not persuasive. Regarding claims 1, 9, 21, 22, 25, and 26, the applicant argues that the ROM/RAM card 12 of Eitaki "does not have a CPU acting as a sequencer nor does it have a synthesizer." None of claims 1, 9, 21, 22, 25, nor 26 recite an extension board having a CPU nor a synthesizer. (Claim 1 recites that a musical tone generation apparatus incorporates a music synthesizer comprising an extension board – not an extension board comprising a synthesizer).

The applicant has commented on the examiners definition of "reproducing device." For clarification the examiner defines "reproducing device" as any device that copies or re-creates information. In the instant situation, a "reproducing device" is any device that copies or re-creates musical data.



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In the diagram, F represents a “reproducing device” where, in the broadest interpretation, I_t may equal $F(I_t)$. Therefore, using this definition, any device within the signal path may be a “reproducing device,” e.g., ROM, RAM, a speaker, a filter, etc. The applicant has submitted that “claim 9 recites an extension board with a storage device and a reproducing device for reproducing musical tone signals ‘in accordance with the pattern information stored in the storage device’...” The applicant further submits that “the extension board of claim 9 recites two inter-operational elements with the reproducing device operating in accordance with information stored in the storage device.” In view of these submissions and the above definition of “reproducing device” the examiner maintains that the ROM/RAM card 12 of Eitaki has two inter-operational devices; the sequencer and the waveform data storage device (herein taken to be a “reproducing device”). Furthermore, the examiner will maintain that a reproducing device, as defined, is inherent in the Eitaki card 12, since output data from the card is “copied or re-created” from input data to the card 12.

Regarding claim 15 and 18, the applicant states that Eitaki does not have a sequencer nor a synthesizer. The device for storing sequence information (and writing this information to storage) is deemed a sequencer (see Eitaki col. 5, line 29). The device for storing waveform information (and the device for writing this information to storage) is deemed a synthesizer (since these waveforms ultimately synthesize tone color).

Regarding applicant’s remarks pertaining to claims 21, 22, and 25, the sequencer of Eitaki servers as a controller for the waveform data stored in the card 12. The

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examiner considers this to be functionally equivalent to "a storage device and a reproducing device operating in accordance with information stored in the storage device." Furthermore, in any music waveform data storage system, it is the precise function of the sequencer to operate in accordance with "information stored in the storage device."

Conclusion

The examiner believes that allowable subject matter may exist in claims 1, 9, 21, 22, 25, and 26. The examiner suggests that the applicant provide a more specific link between the data stored in the extension board (or the "extended music element") and the tone generator. The examiner believes the applicant attempts this by stating in the claims that "the tone generator is independently incapable of generating musical tone signals having the extended music element." The examiner contends that edited data in Eitaki's card 12 would render the tone generator (by itself) "incapable of having the extended music element." The examiner would suggest claim language that suggests that the extended music element is added to waveform data within the tone generator. The examiner would suggest the following limitation be added to all rejected claims that contain language drawn to the extension board; "wherein the extension board adds waveform data to corresponding pre-existing waveform data within the tone generator."

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 703-308-5234. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on 703-308-3370. The fax phone number for the organization where this application or proceeding is assigned is 703-746-9529.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

dsw


ROBERT NAPPI
SUPERVISORY PATENT EXAMINER